

REMARKS

I. STATUS OF CLAIMS

Claims 1-9, 11-15, and 17-34 are now pending in this application. Claims 10 and 16 have been cancelled herein without prejudice or disclaimer and their subject matter incorporated into independent claims 1 and 15, respectively. In addition, claims 1 and 15 now include the proviso originally presented in paragraph [019] of the as-filed specification. Claims 11-13, 17-20 and 33 have been amended to correct dependency and minor typographical errors. Accordingly, no new matter has been added.

Applicants acknowledge that in the Office Action at page 2, the Examiner has withdrawn the election requirement made in the previous Office Action. All pending claims have thus been examined.

II. REJECTIONS UNDER 35 U.S.C. § 112

A. §112, Second Paragraph, Rejection

The Examiner rejects claims 1-3 and 5-31 under 35 U.S.C. § 112, second paragraph, "as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention." Office Action at 2. The Examiner further asserts that "[i]nstant claim 1 recites 'at least one cyclic carbonate capable of polymerizing under external stimulus', which is vague [and] indefinite" and that "[i]t is unclear as to which cyclic carbonates (that are polymerizable) fall within the scope of the claimed invention." *Id.*

Although Applicants do not agree with the Examiner, to advance prosecution, independent claims 1 and 15 are amended herein to include the cyclic carbonate of

Formula (1) as originally set forth in claims 10 and 16, with the addition of the proviso for Z from paragraph [019] of the originally filed specification, as noted above.

Applicants respectfully submit that these amendments make it even more clear which cyclic carbonates fall within the scope of the present claims.

Accordingly, the Examiner's basis for rejecting Claims 1-3 and 5-31 under §112, second paragraph, has been overcome and should be withdrawn.

B. §112, First Paragraph, Rejection

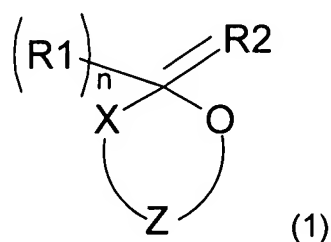
The Examiner also rejects Claims 1-34 under 35 U.S.C. § 112, first paragraph, "as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention." *Id.* at 3. Although Applicants disagree with the rejection, the amendments to independent claims 1 and 15 discussed above even more clearly describe the presently claimed cyclic carbonate compounds. Further, the amended claims "reasonably convey" to one of ordinary skill in the art that the applicants had "possession of the claimed invention" at the time the application was filed, as evidenced by the full support for these amendments in the originally filed specification and claims.

Thus, the Examiner's basis for rejecting Claim 1-34 under 35 U.S.C. §112, first paragraph, has been overcome and should be withdrawn.

III. REJECTION UNDER 35 U.S.C. § 102

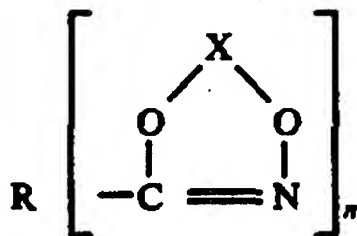
The Examiner rejects Claims 1-11, 14-17, 18-23, and 31-34 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent 4,049,007 to Russell et al. (hereafter, "*Russell*"). In making the rejection, the Examiner asserts, at page 4 of the Office Action, that "*Russell* teaches hair-waving compounds comprising of film-forming resins containing pendant hydroxyl, amine, and/or thiol groups, a cyclic nitrile carbonate and a flexible adhesion promoter in a non-aqueous solvent" and that "the structure of the cyclic nitrile carbonate meets the description of the variables X, Z, R1, R2, etc., as mentioned in claim 10."

Applicants disagree. Contrary to the Examiner's assertion, the cyclic nitrile carbonate of *Russell* does not meet the limitations of claimed Formula (1) (originally in claims 10 and 16, now part of claims 1 and 15, respectively). The present claims are directed to compositions comprising at least one cyclic carbonate of Formula (1), reproduced in part below:



Z is defined as "chosen from divalent linear or branched C₂ to C₃₀ alkylene radicals, optionally interrupted by at least one heteroatom, and optionally substituted by at least one radical chosen from hydroxy, C₆ to C₃₀ aryl, amino, carboxy, halogen, C₁ to C₁₀ alkoxy, and thiol radicals." Thus, the Z segment of the cyclic carbonate ring according to the instant claims must comprise at least two carbon atoms, optionally

interrupted (but not replaced) by heteroatoms, and optionally **substituted** (but again not replaced by) certain radicals as claimed. In contrast, *Russell's* cyclic nitrile carbonate has the structure reproduced below, wherein X is -C=O, -S=O, or -(C=O)₂:



See *Russell* at, e.g., Abstract, col. 3 lines 25-35, col. 5 lines 55-68, Claim 1, Claim 20.

Russell's cyclic nitrile carbonate does not meet the limitations of present Formula (1) as it lacks a segment (such as the presently claimed Z) within the carbonate ring comprising at least two carbon atoms. In other words, if X in present Formula (1) is oxygen, then Z of Formula (1) does not correspond to the -C=N- portion of *Russell's* ring. Z must have at least 2 carbons atoms (C₂ to C₃₀), and although the alkylene chain of Z can be **interrupted** by at least one heteroatom or **substituted** by the radicals listed in the claims, there still must be 2 carbons in the ring.

In view of the above, *Russell* does not anticipate or render obvious the instant claims and the rejection under 35 U.S.C. § 102(b) should be withdrawn.

IV. REJECTIONS UNDER 35 U.S.C. § 103

The Examiner rejects Claims 1-23 and 31-34 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent 4,405,646 to Boden et al. (hereafter, "*Boden*"). The Examiner also rejects Claims 24-30 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent 4,049,007 to Russell et al. (*Russell*) in view of U.S. Patent 4,797,130

to Clausen et al. (hereafter, "*Clausen*"). Applicants respectfully traverse each rejection as set forth below.

With respect to obviousness, several basic factual inquiries must be made in order to determine the obviousness or non-obviousness of claims under 35 U.S.C. § 103. These factual inquiries, set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 17, 148 U.S.P.Q. 459, 467 (1966), require the Examiner to:

- (1) Determine the scope and content of prior art;
- (2) Ascertain the differences between the prior art and the claims in issue;
- (3) Resolve the level of ordinary skill in the pertinent art; and
- (4) Evaluate evidence of secondary considerations.

The obviousness or non-obviousness of the claimed invention is then evaluated in view of the results of these inquiries. *Graham*, 383 U.S. at 17-18, 148 U.S.P.Q. 467; see also *KSR Int'l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 82 U.S.P.Q.2d 1385 (2007).

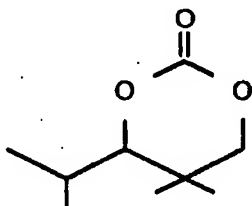
The Supreme Court, in its recent decision in *KSR Int'l Co. v. Teleflex Inc.*, recognized that a showing of "teaching, suggestion, or motivation" could provide helpful insight in determining whether the claimed subject matter is obvious under Section 103(a). In addition, the Supreme Court mandated in *KSR* that "[t]o facilitate review, this analysis [of whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue] should be made explicit." *Id.* (citing *In re Kahn*, 441 F.3d 977, 988 (Federal Circuit, 2006) ("[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness"))).

In the present case, it is Applicants' position that the Examiner has not met the standards set forth by *Graham* and *KSR*, as discussed below.

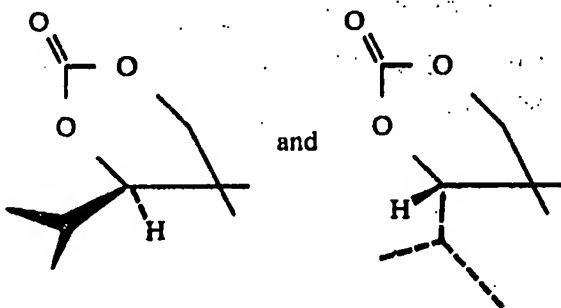
A. Rejection under 35 U.S.C. § 103(a) over *Boden*

The Examiner rejects Claims 1-23 and 31-34 under 35 U.S.C. § 103(a) as being unpatentable over *Boden*. Office Action at 6. In making this rejection, the Examiner contends that *Boden* "teaches 6-membered cyclic carbonate that falls within the genus of cyclic carbonates of instant claim 10. *Boden* teaches the compounds for enhancing aroma of perfumes and suggests several applications such as hair spray, perfumes, [colognes] and other cosmetic compositions (see example X for hair spray composition), which read on instant hair care." Applicants respectfully disagree for at least the following reasons.

Boden teaches the use of a "cyclic carbonate defined according to the structure:



or the stereoisomers defined according to the structures:



and uses thereof in augmenting or enhancing the aroma or taste of consumable materials.” *Boden* at col. 1, lines 11-34. Based on this disclosure, the compound taught by *Boden* does **not** fall within the scope of the presently amended claims, since Formula (1) now specifically excludes compounds where X is O, R₂ is O, n is 0, and Z is isopropyl-2,2’-dimethylpropylene, as would be required to make the compound taught by *Boden*.

Thus, *Boden* neither teaches nor suggests the use of cyclic carbonates within the scope of the present claims. Accordingly this rejection has been overcome and should be withdrawn.

B. *Rejection under 35 U.S.C. § 103(a) over Russell in view of Clausen*

The Examiner rejects Claims 24-30 under 35 U.S.C. § 103(a) as being unpatentable over the combination of *Russell* and *Clausen*. Office Action at 7. In making this rejection, the Examiner contends that “*Russell* teaches the claimed cyclic carbonate compounds in hair waving compositions and their advantages in hair curling after the hair is treated with oxidizing and reducing agents.” *Id.* at 7, internal citations removed. This is simply inaccurate. As discussed in **III.** above, *Russell* teaches a cyclic nitrile carbonate which does not meet the terms of Applicants’ Formula (1) and thus does not fall within the scope of the instant claims. *Clausen* in no way remedies *Russell*’s failure to disclose compounds falling within the scope of the instant claims.

Thus, neither *Russell* or *Clausen* alone nor the combination of *Russell* and *Clausen* would have suggested to one of ordinary skill in the art to prepare a

composition within the scope of the instant claims. As a result, the rejection over *Russell* in view of *Clausen* is in error and should be withdrawn.

V. CONCLUSION

In view of the foregoing remarks, Applicants respectfully request reconsideration of this application and timely allowance of the pending claims. If the Examiner believes a telephone conference could be useful in resolving any of the outstanding issues, she is respectfully invited to contact Applicants' undersigned counsel at (202) 408-4454.

Please grant any extensions of time required to enter this response and charge any additional required fees to Deposit Account No. 06-0916.

Respectfully submitted,

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Dated: October 25, 2007

By: 
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